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ADDRESS

ON OPENING OF

The Institute of Hygiene

OF THE

University of Pennsylvania

BY

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Mr. Provost, Trustees, Gentlemen and Ladies:

I appear before you to-day officially as Chairman of the Committee on Hygiene of the University of Pennsylvania. I am here, also, to represent my friend, Henry Charles Lea, that I may make over to the Trustees the completed Laboratory, which he has built for the teaching and study of hygiene.

This, my very pleasant task, shall be brief. I am about, Mr. Provost, to give you another man's gift. For the moment, I am the owner. A faint, a subtle sense of the joy of being able, aye, more, of being willing to give on a scale so royal comes to me as I think of what I am about to do. I realize the honest joy such bounty brings to him who gives. I assure you that it fills me with an ardent, a philanthropic desire that more of you should share the delight of liberal giving to this ancient school of learning.

All that I might say as to the need for teaching and research in hygiene will be better said to-day by experts in this art and in the sciences which justify its precepts. But, as a physician, I am strongly moved to use this rare opportunity to preach a brief medical sermon. My text is taken from the first

chapter and the first verse of a late writer on hygiene. "Hygiene aims to make growth more perfect, life more vigorous, decay less rapid, death more remote."

To this rather material statement I would add another. The highest usefulness in life is only possible with the highest standard of health. I no longer wonder that the ancients worshipped *Health*, the fair goddess Hygeia. Be pleased to observe that this was a feminine deity, a goddess of health. The fact is not without meaning. So great is my reverence for supreme wholesomeness, that I should almost be tempted to assert, that perfect health is virtue. At least, as a physician, I like to say that, in my opinion, and for men in general, health, the best health, is essential to the attainment of that efficiency which makes duties easy, and resistance to temptation a normal result.

Speaking of the higher, the spiritual development of man's faculties, a famous divine has said, "Yes, it is a good thing to be born again, but he who wins this new birth will be better born again for having first been well born." The truth, the largely applicative truth of this epigram, comes home to every physician who has seen how much of the usefulness of the good, and the productiveness of the

intellectual, is crippled or lost because of physical failures due to follies in education, or to impairments growing out of preventable maladies.

I have a fixed belief that a population below the normal level of health is sure to be also below the norm of goodness: I am as firm a disbeliever in the utility of long-disordered health to make men better. You remember what Becky Sharpe said of goodness. "I should have been a good woman had I had £5,000 a year." Trust me, a large income of health means for the many, capacity to live at their moral best for themselves and for their fellows. Poverty of blood, like poverty of pocket, has its temptations.

Others to-day will tell you how the ill-health which comes to masses of men in epidemics affects the economic prosperity of a community—how vast is its influence, how untraceably far-reaching. I have chosen rather to hint at the ill results as to morals which may arise from lowered health, owing to the poverty it entails, the direct and indirect temptations it creates, the self-indulgence it fosters in a variety of forms. It were easy to point this moral with many a sad tale. The story of every great epidemic—the plague, the cholera, yellow fever—is dark with histories of human baseness. But there

are, in our vast cities, influences more or less capable of remedy, which cause no death and put none at once to bed, and which, nevertheless, entail on communities lowered conditions of health, affect the enterprise and spirits of men, and morally and mentally depress so as in subtle ways to cause degradation, desire for alcohol and degenerative changes.

In a few pregnant sentences I have tried to set before you this novel question of the influence of health on morals. I dare not linger on a tempting theme; I started with a text and find I have given you but a string of texts—may I not trust the sermon to your own intelligence?

To teach the individual the preservative laws of life; to teach the city, the commonwealth, the country how to avoid and subdue epidemics; how to provide that every water course be kept sweet and pure; the air of cities uncontaminate; manufactories innocent to health—these are the large lessons which our schoolhouse of health is to teach.

Thinking of our new enterprise, and, too, of the individual failures which may come out of an insufficient capital of bodily health, I am suddenly reminded of the holiday which the nation is now keeping. No thoughtful American can face an audience to-day, whatever may be the more remote purpose of his

speech, and fail to think of one great historic figure. Let me bring him into relation with our own business of the hour. He represents for me that admirable form of hygienic preparation for a time of strain and trial, which came out of a vigorous, manly, out-of-door struggle with the exigencies and risks of the life of an engineer and frontiersman. Sound alike in mind and body, of clean descent, his consummate physical health must have had much to do with the clearness of head, the constancy of energy, and the perfect courage which carried him through the wasting worries, the doubts and the darkness of disastrous days. It would be easy to make for this picture of successful health a sad, contrasted background of historic failures, of national defeats, of perverted genius due to the want of this one thing—health.

A hundred illustrations crowd upon my memory, but without apology I turn from the great presence I summoned for a moment to point the moral of the hour, and leave with you the thought of the value to greatness, aye, to all goodness, of sturdy health.

And now, a brief summary of the history of the birth of this Laboratory and School of Health.

A few years ago, a grave loss of one very dear

to my friend, Henry Charles Lea, turned his ever-active attention to the progress of science in its later revelations of the cause of consumption. The vast discoveries of Pasteur led up to Koch's convincing proof of the rôle played by minute organisms in the causation of tubercle. A multitude of like researches followed with confusing swiftness. One disease after another has been traced to its parent cause in some tiny agent of mischief. A row of culture-tubes in a laboratory, with their bright-colored organisms, represents a Pandora's box of pathological disaster. But a little while ago the strong advance of medicine seemed to be stopped as by a wall. Then of a sudden wide gateways opened, and behold, this magnificent outlook—this broad road with its numberless byways—and so again we go forward with intellectually invigorated hope.

Apprehending the value of the many ways thus open to beneficent knowledge, Mr. Lea proposed to us to create a School of Hygiene, in which not only should we teach the art to live, but where also the new and effective helpmate of hygiene—bacteriology—should be provided with means of developmental research. It became clear, somewhat later, that we could hope before long to place in directive charge of the whole work the one man best fitted

for it in America—Surgeon John S. Billings, of the Army. The well-known modesty of my friend forbids me to say too much of him. The varied tasks he has accomplished serve well to show that a man may be master of many arts, if only he be so constructed hygienically as to be permanently endowed with that unending energy which this man has brought to the administration and construction of museums, libraries, hospitals, to the creation of unsurpassed catalogue and dictionary, to the medicine of war, and to the study of hygiene. This half-dozen men in one is the Director of our new enterprise. The fact that he was to be at its head induced Mr. Lea to increase his gift for a building to \$50,000. On hearing of this, the late Henry C. Gibson at once offered \$25,000 as means for equipment.

I pause to render my tribute of thankful praise to the memory of this kindly, gentle and most generous man. He had the art of giving with such courteous simplicity as made those who sought his bounty feel that he was the one obliged. He had, too, at need, the art of saying "No" in such a fashion that you felt sorry for his manifest disappointment. To no other man was this great school so deeply in debt for repetitions of large gifts.

Mr. Lea has declined to be himself the immediate

agent in transferring to the Trustees the admirable building, which is now fully fitted up and ready for active work. Standing here in his place, I am unwilling to annoy my friend of many years, by too vividly saying what I think of his thoughtful and splendid gifts to the Philadelphia Library and to this University. But I find it impossible to do as he would wish, and pass by without comment the man who has given us a new means of usefulness. I prefer to hurt his sense of reserve, rather than to sacrifice my own selfish sense of justice.

As the head of the oldest medical publishing firm in the world, Mr. Lea was so fortunate, or rather so able, as to win for himself the leisure out of which has grown a series of historical works without rival in their special line.

Most of you better know how often this quiet and retiring scholar has come out of his mediæval studies to make a sturdy fight in the cause of political reform, and to wage fierce war against municipal misrule. My words would disturb him, were he here to-day, but, surely, we are not too prone to praise. There is a time for all things, even for honest recognition of a pure, a true, an honorable life, and of the good and manly work of a model American, a gifted scholar, a generous man. And now, he turns to give

to this city the only institute of hygiene in America, and, with far-seeing thoughtfulness, asks that the engineer, the architect, and the physician we train, shall be obliged to profit by its lessons as part of their education. I have asked that he would at least say by proxy a few words, and here is the brief message he has authorized me to deliver.

“MY DEAR DR. MITCHELL :

It gives me pleasure to respond to your request for a few words on the objects and motives which led to the founding of the new **Laboratory of Hygiene**.

Of all the claims of your noble profession on the gratitude of mankind, perhaps the chiefest is due to the zeal of its members in laboring as earnestly for the prevention as for the cure of disease. Scientific hygiene is essentially the creation of physicians who have ever been foremost in discovering and promulgating the facts and principles on which improvement of public health must be based. Great as have been the strides of this science during the past generation, even more is reasonably to be expected of it in the future. It is not visionary to say that we are on the threshold of discoveries which promise, if rightly used, to relieve humanity from some of the distressing evils which have weighed it down in the past. To this most desirable consummation the University of Pennsylvania makes a notable contribution in rendering the study of hygiene compulsory on all who seek its degrees in Medicine, Architecture, and Civil Engineering, and in organizing a Department of Hygiene where scientific investigation and instruction can be conducted under the most favorable conditions.

Important as will be the functions of this department in stimulating original research, perhaps even more immediately important to the community will be its educational activity in annually sending forth numbers of thoroughly trained and well-equipped hygienists. Through their agency we may expect that popular errors will be largely dispelled, and popular indifference to the laws of health will be removed. The mass of human misery directly traceable to these errors and this indifference can scarce be overestimated. Of this our own city offers a pregnant example. No great centre of population is anywhere more happily situated than Philadelphia with respect to hygienic advantages. It has every requisite for healthful and prolonged life in its soil, climate, facilities for drainage, abundance of pure water within reach, ample space over which to spread without overcrowding. If proper respect were paid to hygienic rules, preventable disease would be virtually unknown among us, and our annual death-rate would not exceed fifteen to the thousand. Yet during the past year the interments amounted to 22,649, which in a population of eleven hundred thousand souls is over $20\frac{1}{2}$ per thousand. Now this difference of $5\frac{1}{2}$ per 1000 means about 6,000 deaths per annum from purely preventable causes—6,000 human beings snatched away before their time, and other thousands reduced to want by the loss of those on whom they were dependent. Yet, ghastly as is this aggregate, it is in reality the smallest portion of the evil. Experience shows that every death represents about twenty cases of sickness not immediately fatal, so that 6,000 preventable deaths per annum infer 120,000 cases of preventable sickness. Each case of sickness will average from 35 to 40 days, so that every year in Philadelphia there are 12,000 years of preventable sickness endured by its inhabitants.

Think what an aggregate of suffering this represents—think of the thousands of families who are annually exposed to privation through the disability incurred by the breadwinner or by the mother—think how many of those who are hovering on the border between comfort and poverty are permanently plunged into pauperism through temporary sickness—and you will agree with me that the Department of Hygiene, if rightly administered and efficiently supported by the public, will be not merely a valuable scientific adjunct to the University, but will be the most practical and the most useful institution of public beneficence that the community can have, for it will deal in the largest way with the causes of these vast evils. If it is blessed to relieve human miseries, it is still more blessed to prevent them. Faithfully yours,

HENRY CHARLES LEA."

What more can I add to this clear and touching appeal? ah! but there must be some among you who will read between its lines their own memories of glad young lives sacrificed to diseases which should hardly exist, or of the days of doubt and heartfelt anguish, which ended more happily, but can never, never be forgotten. There can be few of us in this typhoid-smitten city, who have not walked of late in the shadows of this needless calamity. Try to believe with me that, in a rightly organized municipal life, these evils may be greatly lessened. They are not necessities of God's making. Try, ah! try with us to think that much of pain and disease is

but the stern consequence of some sin of omission or commission, or of the indifference and unintelligence of an inert community.

Mr. Lea's gift was conditioned on the raising of \$200,000 as an endowment. The trustees were themselves so assured of the need for this department that they gave in individual gifts not less than \$35,000. The professors contributed \$12,000, and the Provost was enabled to secure for it the endowment of the Pepper Professorship of Hygiene, amounting to \$57,000. Altogether the endowment reaches \$213,000, inclusive of Mr. Gibson's gift.

If now you will in turn permit me to read between the lines of Mr. Lea's letter, and be eloquent where he is mute, this would be his brief addition.

The city and the community owe to my belief in their needs this school of health. A generous hand equipped it. To make it thoroughly all it should be—to buy for its use those precious instruments, competent chemists and bacteriologists—it lacks at least \$75,000 of further endowment. Such words as these the giver of this laboratory might have used to the many in this city, who doubtless are ready to match his generosity.

When we have trained within these walls our missionaries of health, we shall send them forth in

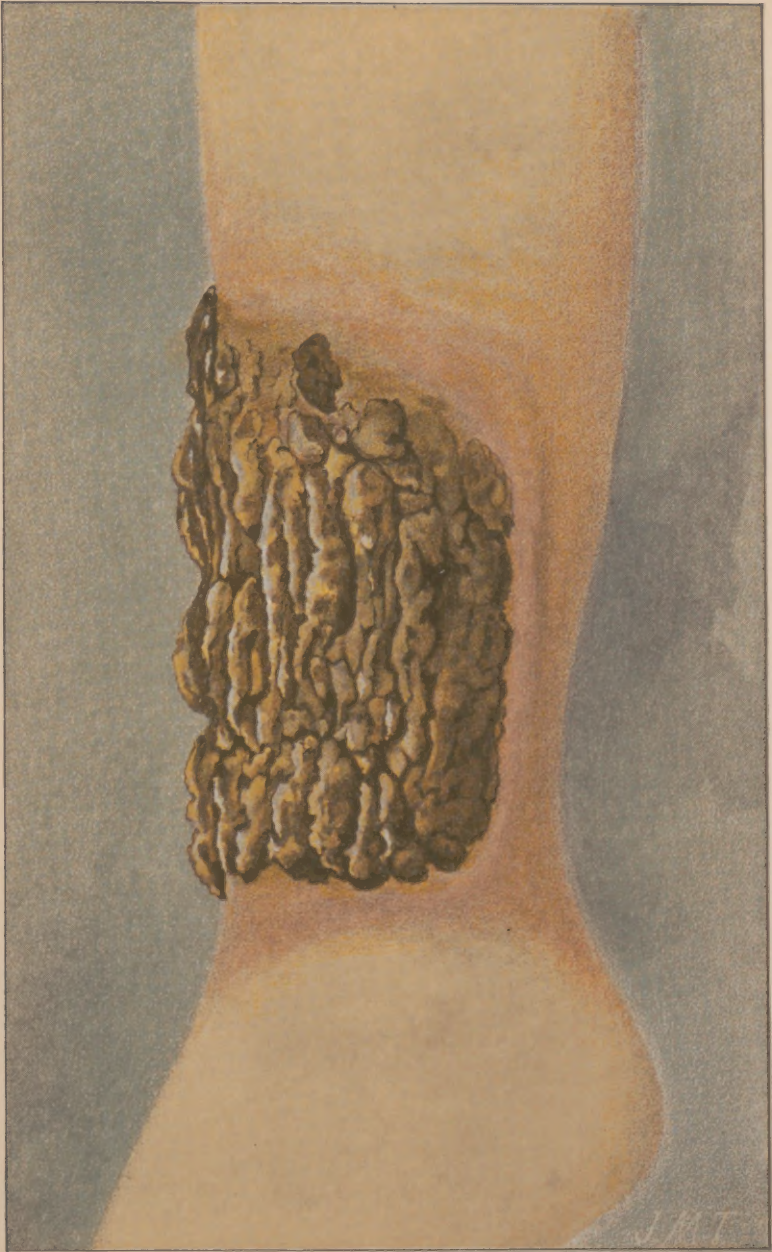
our University Extension work to tell the people that sweet air and pure water should have a say in the ballot-box, and that whether Democrat or Republican divide the spoils of petty city office is a matter contemptibly indifferent as compared to insuring for masses of men immunity from disease, pure air, space, playgrounds for man and boy, books, baths, music. For honest health, men, aye, and their offspring, need more than security of steady employment. Work without chance of play of brain and limb makes Jack a dull boy, and a dull boy is nearer to possibilities of disease than a happy boy. Believe me, this large-minded view of the hygienic needs of a people is essential to the fostering of the best physical, mental and moral qualities of a great nation.

I beg leave, Mr. Provost and Trustees, in the name of Henry Charles Lea, to transfer to your keeping the admirable building he has erected.

And you, sir, Director of the activities of our new laboratory, to you we confide with trustful hope the broadly human interests of this enterprise. We believe that, in its practical aspects, the more remotely valuable results of pure science will not be neglected, and that the work of this laboratory will represent that hygienic perfection of science in which constant

energy, incessant experiment and observation, and a wise scepticism shall devotedly combine to evolve out of discovery knowledge applicative at last to the nobler uses of mankind.

It is my ardent wish, Mr. Provost, that, through the long years to come, when you and I and all here are gone, the quality of the work still done within those walls may continually justify the bounty of my friend—may help to make the city which is dear to him and to me more wholesome, and may improve and lengthen the lives of men.



Drawing of unusual form of disease of skin
in a case of Hysteria.